

Home Energy Score

Joan Glickman

U.S. Department of Energy

March 15, 2011

Update since November 2010

- Changes in pilot locations
 - Chicago
 - Colorado
 - Others providing data
- Finalized pilot approaches
- Made refinements to Home Energy Scoring Tool
 - Changes in BTU bins
- Completed materials
 - Homeowner information
 - Assessor talking points
 - Homeowner questionnaire
 - Assessor questionnaire
- Trained and qualified 43 assessors
 - All pilots except Nebraska (per their schedule)

What are we testing?

- Scoring tool
 - Inputs: are there additional data points we should collect?
 - Diagnostic information: to what degree does it affect calculations?
 - Comparison to other tools (energy calculations, recommendations)
- Scoring methodology
 - Bins: do BTU values accurately reflect homes in each climate zone?
- Assessor understanding and reaction
 - Does level of certification or training make a difference?
 - How long does it take to collect and input the data?
- Homeowner understanding and reaction
 - Do they understand the information and find it useful
 - Other issues (e.g., should we break out energy types (electricity, natural gas, other))

Data Collection & Analysis

- Portland State University
 - Homeowner pre-score and post-score questions
 - Unique identifiers
- National Renewable Energy Laboratory
 - Data repository
 - Scoring data from pilots
 - Utility bills, additional home characteristics, and homeowner demographics from sub-set of pilots
 - Additional data from other sources

Analysis

- Comparison of BTU calculations from Home Energy Saver Pro, Home Energy Scoring Tool, and other software tools (e.g., REM/Rate, BeOpt)
- “True-up” of Home Energy Scoring Tool calculations with utility bills where additional information is available (e.g., homeowner info, weather)
- Potential analysis of large data sets to better understand relationship between actual and modeled energy use

Home Energy Score Pilots in 10 States

- Virginia
- Massachusetts
- Minnesota
- Indiana
- South Carolina
- Nebraska
- Texas
- Oregon
- Pennsylvania
- Illinois

Pilot Variations

- # Homes
- Energy Modeling Tool Used
- Recommendations
- Repeat assessments
- Diagnostics Included (if yes, which)
- Access to utility bills (if yes, can they provide them)
- Availability of Archived Data
- Collecting demographic data

Pilot Characteristics (draft, subject to change)

Pilot	# Homes	Audit	Audit Tool	Better Buildings Participant	Participant Selection	Data Collection	Diagnostics?
NE	150	HERS, BPI	Prop.	Yes	As part of BB program	As per BB program	Yes
IN	100	BPI	REM/Rate, NEAT	No	Weatherization program	Through contractors	Blower door & CAZ
MA	200	BPI	NEAT	No	Database of interested homeowners	Through contractors	Blower door
VA	200	BPI	Earth Advantage	Yes	Self-selected from HPwES program and Cent. VA Coop. customers	Through contractors and staff delivered surveys	Blower door option, maybe CAZ
SC	200	HERS, BPI	TBD	No	Database of interested homeowners	Through contractors and subcontracted firm	Blower door

Pilot Characteristics (draft, subject to change)

Pilot	# Homes	Audit	Audit Tool	Better Buildings Participant	Participant Selection	Data Collection	Diagnostics?
PA	12	HERS, BPI	TREAT	No	Component of Green Innovation Festival	Through contractors	No
OR	400	BPI	RealHome Analyzer, SIMPLE	No	Random selection from database of interested homeowners	Through contractors and surveys	No
MN	200	BPI	SIMPLE	No	Selected from Community Energy Services Program	Through staff	Blower door
TX	250	HERS	U. of OK proprietary tool	No	Database of interested homeowners	Through staff	Blower door upon request
IL	200	HERS, BPI	MyHomeEQ	Yes	Chicago Air Sealing Pilot participants	Through staff	Blower door

Home Energy Score Timeline



Conduct Assessor Training & Orientation

Stakeholder Outreach

Conduct Home Assessments & Generate Home Energy Score

Provide Questions to Homeowners Before & After Assessments

Provide Questions to Assessors

DOE Conducts Research & Analysis

DOE Refines Program Based on Findings

▲ Pilots Launch

▲ Summer Session with Pilots

▲ DOE Announces Plans for Next Phase

Next Steps

- Conduct pilot studies and collect information
 - Homeowner feedback from surveys
 - Assessor feedback
 - Home characteristics
 - A few pilots may also be able to provide utility bills and operational information (all anonymous)
- Analyze data
- Make continued improvements to Scoring Tool
- Determine quality assurance requirements
- Develop plan for moving forward with National Home Energy Registry
- Refine Home Energy Score per findings before national roll--out

Questions and Comments Welcome

More information available at
www.homeenergyscore.gov

Send comments and questions to
homeenergyscore@ee.doe.gov



No Simple Answer...But, Partnering Can Help Expand the Market

- Certain components will benefit from enhanced coordination
 - National Home Energy Registry
 - Analysis, calculation methods
 - Improved diagnostics and methods
 - Work specifications and worker standards
 - Quality assurance